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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,000	06/05/2006	Ryota Odake	09792909-6326	6729

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SONNENSCHEIN NATH & ROSENTHAL LLP
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

EXAMINER	
RAINEY, ROBERT R	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
07/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,000	ODAKE ET AL.	
	Examiner	Art Unit	
	ROBERT R. RAINEY	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/13/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7/13/2005 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the documents lined through have not been considered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0015132 to *Kobayashi et al.* ("*Kobayashi*") in view of U.S. Patent No. 6,154,190 to *Yang et al.* ("*Yang*").

As to **claim 1**, *Kobayashi* discloses A display device comprising: display means in which, by applying voltages to row electrodes and column electrodes, the state of cholesteric liquid crystal is changed to display information; a row driver for applying a voltage to the row electrodes; a column driver for applying a voltage to the column electrodes (see for example Fig. 4 or [0127]-[0130]); row-

driver-reference-voltage switching means for selectively switching a first reference voltage supplied to the row driver between a first voltage having a voltage value greater than the absolute value of the bipolar voltage required for setting the state of the cholesteric liquid crystal to a planar state, and a zero volts (see for example Fig. 7 or [0119]-[0122]); column-driver-reference-voltage switching means for selectively switching a second reference voltage supplied to the column driver between a second voltage whose absolute value is equal to the first voltage and which is reverse in polarity to the first voltage, and zero volts; and control means for controlling the operation of the row driver and the column driver, the row-driver-reference-voltage switching means, and the column-driver-reference-voltage switching means, wherein: a driving voltage supplied to the row driver is a first bipolar driving voltage whose absolute value is a third voltage; a driving voltage supplied to the column driver is a second bipolar driving voltage whose absolute value is a fourth voltage; the sum of the third voltage and the fourth voltage is a voltage value greater than the voltage value required for setting the state of the cholesteric liquid crystal to a focal conic state; and when the control means sets the cholesteric liquid crystal to a planar state, after controlling the row-driver-reference-voltage switching means to set the first reference voltage as the first voltage, the control means controls the column-driver-reference-voltage switching means to set the second reference voltage as the second voltage, and controls the row driver and the column driver so that the first reference voltage is applied to the row electrodes and the second reference

voltage is applied to the column electrodes (see for example Fig. 10 or [0151]-[0157]).

Kobayashi does not expressly disclose that in order to set a desired portion of the cholesteric liquid crystal to the focal conic state, the control means controls the row-driver-reference-voltage switching means and the column-driver-reference-voltage switching means to switch each of the first reference voltage and the second reference voltage to zero volts, and controls the row driver and the column driver to control supply of the first bipolar driving voltage and the second bipolar driving voltage to the cholesteric liquid crystal.

Yang discloses a cholesteric liquid crystal display and in particular: that in order to set a desired portion of the cholesteric liquid crystal to the focal conic state, the control means controls the row-driver-reference-voltage switching means and the column-driver-reference-voltage switching means to switch each of the first reference voltage and the second reference voltage to zero volts, and controls the row driver and the column driver to control supply of the first bipolar driving voltage and the second bipolar driving voltage to the cholesteric liquid crystal (see for example 4:35-60).

Kobayashi and *Yang* are analogous art because they are from the same field of endeavor, which is cholesteric liquid crystal displays.

At the time of invention, it would have been obvious to a person of ordinary skill in the art modify the device after to *Kobayashi* switch the voltages to zero volts as taught by *Yang*. The suggestion/motivation would have been to

provide advantages such as to achieve a rapid switching time (see for example 2:56-65).

As to **claim 2**, in addition to the rejection of claim 1 over *Kobayashi* and *Yang, Kobayashi* further discloses the row driver is supplied with the first bipolar driving voltage; the column driver is supplied with the second bipolar driving voltage; the first bipolar driving voltage and the second bipolar driving voltage each have a voltage value in which the sum of the absolute values of the third voltage and the fourth voltage is approximately a half of the first voltage; and when the control means sets the desired portion of the cholesteric liquid crystal to the focal conic state, the control means controls the row driver to sequentially apply the first bipolar driving voltage so as to scan the row electrodes, and controls the column driver to selectively apply, to the column electrodes, the second bipolar driving voltage, which is reverse in polarity to the first bipolar driving voltage applied so as to scan the row electrodes (see for example Fig. 10 or [0151]-[0157]).

Claim 3 claims the method implicit in the apparatus claimed in claim 2 and is rejected on the same grounds and arguments.

Claim 4 claims the driving circuit claimed as a part of the device claimed in claim 2 and is rejected on the same grounds and arguments.

Claims 5-8 break the limitations of claim 2 up into pieces and are rejected on the same grounds and arguments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT R. RAINEY whose telephone number is (571)270-3313. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RR/

/Amare Mengistu/
Supervisory Patent Examiner, Art Unit 2629